Amendment under Article 34

AMENDMENT

(Amendment under Article 11 Japanese Law)

To: Commissioner of the Patent Office

1 Identification of the International Application

PCT/JP03/11333

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4 Item to be Amended DESCRIPTION

5 Subject matter of Amendment

(1) Page 6, line 1 of the Description should be amended.

6 List of Attached Document

(1) Replacement sheet of page 6

polarization degree = $(k_1 - k_2') / (k_1 + k_2')$.

When a polarizer of this invention is prepared by a same condition (an amount of dyeing and production procedure are same) as in commercially available dye-based polarizers (parallel transmittance 0.321, polarization degree 0.90: $k_1 = 0.80$, $k_2 = 0.04$), on calculation, when α is 2 times, a characteristics having a parallel transmittance 0.320, a polarization degree 0.996, is obtained. If a concentration of an absorption dichroic material is reduced with a fixed polarization degree of 0.90, a parallel transmittance can be increased to 0.406.

The above-mentioned result is on calculation, and function may decrease a little by effect of depolarization caused by scattering, surface reflection, backscattering, etc. To reveal the above-mentioned function effectively, less backscattering is preferable, and a ratio of backscattering strength to incident light strength is preferably 30% or less, and more preferably 20% or less.

As the above-mentioned polarizers, films manufactured by stretching may suitably be used.

In the above-mentioned polarizer, minute domains preferably have a length in a Δn^2 direction of 0.05 to 500 μm.

In order to scatter strongly linearly polarized light having a plane of vibration in a Δn^1 direction in wavelengths of visible light band, dispersed minute domains have a length controlled to 0.05 to 500 μm in a Δn^2 direction, and preferably controlled to

0.5 to 100 μm. When the length in the Δn^2 direction of the minute domains is too short a compared with wavelengths, scattering may not fully provided. On the other hand, when the length in the Δn^2 direction of the minute domains is too long, there is a possibility that a problem of decrease in film strength or of liquid crystalline material forming minute domains not fully oriented in the minute domains may arise.

In the above-mentioned polarizer, preferably adopted is a liquid crystalline thermoplastic resin showing up a state of a nematic phase or smectic phase in a temperature region lower than the glass transition temperature of a translucent thermoplastic resin as the birefringent material forming the minute domain.

In the above-mentioned polarizer, as the birefringent material forming the minute domain preferably used is a product obtained by polymerization after aligning a liquid crystalline monomer showing up a state of a nematic phase or smectic phase in a temperature region lower than the glass transition temperature of a translucent thermoplastic resin.